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09/842,561	04/25/2001	Yann Cheri	35451/127 (3626.Palm)	7494

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EXAMINER

CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/842,561

Applicant(s)

CHERI ET AL.

Examiner

Antonio A Caschera

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Affidavit - 37 CFR §1.131***

1. The declaration filed on 7/21/2004 under 37 CFR 1.131 is sufficient to overcome the Dutta reference.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Weindorf (U.S. Patent 6,762,741 B2).

In reference to claim 1, Weindorf discloses an automatic brightness control system for a display device whereby the brightness of the display panel is controlled based on a fractional power function of the ambient light impinging on the display panel (see column 3, lines 38-42). Weindorf discloses the system to operate in a number of devices including laptop computers, personal organizers and the like (see column 5, lines 10-16). Weindorf discloses the display device comprised of a bezel for holding the outer perimeter of the display panel and control circuitry for controlling the display panel and backlight of the display panel (see column 5, lines 37-40 and 45-54). Weindorf further discloses the bezel to hold ambient light sensors (see

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column 6, lines 53-60). Weindorf also discloses that the system may comprise of multiple ambient light sensors (four sensors), providing signals, to the control circuitry (see #114 and 108 of Figure 1), measuring the amount of light impinging on the surface of the display panel (see column 14, lines 52-67). Weindorf discloses that the multiple signals received from the light sensors are averaged and then determined to signify a "Day" or "Night" condition, from which the display backlight is adjusted accordingly (see column 14, lines 60-67, column 15, lines 1-15, 55-64 and columns 16-17, lines 64-6).

In reference to claim 3, Weindorf discloses all of the claim limitations as applied to claim 1 above. Weindorf also discloses that the system may comprise of multiple ambient light sensors (four sensors), providing signals, to the control circuitry (see #114 and 108 of Figure 1), measuring the amount of light impinging on the surface of the display panel (see column 14, lines 52-67).

In reference to claim 4, Weindorf discloses all of the claim limitations as applied to claim 3 above in addition, Weindorf discloses the ambient light sensors as photodiodes (see column 6, lines 19-25).

In reference to claim 7, Weindorf discloses all of the claim limitations as applied to claim 1 above in addition, Weindorf further discloses the display panel being of LCD type (see column 5, lines 19-20).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weindorf (U.S. Patent 6,762,741 B2) in view of Helms (U.S. Patent 5,952,992).

In reference to claim 2, Weindorf discloses all of the claim limitations as applied to claim 1 above. Although Weindorf discloses the light sensor located in a corner edge of a display panel (see #114 of Figure 1), Weindorf does not explicitly disclose the two light sensors disposed near opposing edges of the display however Helms does. Helms discloses the use of two photodetectors to detect ambient light directed toward a display (see column 4, lines 41-51 and #14', 410 of Figure 4). Helms also discloses the two photodetectors on opposite sides of an LCD display (see #14' and 410 of Figure 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the photodetector positioning techniques of Helms with the automatic brightness control system of Weindorf in order to provide multiple light readings sensing light directed towards the display from multiple angles/directions, ensuring the best possible brightness for the display based upon the ambient light conditions (see column 4, lines 52-62 of Helms).

4. Claims 5, 6 and 8-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weindorf (U.S. Patent 6,762,741 B2) in view of Narveson et al. (U.S. Patent 4,386,345).

In reference to claim 5, Weindorf discloses all of the claim limitations as applied to claim 4 above. Although Weindorf discloses the control circuitry to adjust the brightness of the display panel based on averaging the signals measured from the four light sensors and then selecting a brightness step control signal based on the averaged signals (see column 6, lines 59-65 and

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column 14, lines 52-67), Weindorf does not explicitly disclose adjusting the contrast along with brightness of the display. Narveson et al. discloses a color display apparatus for use under wide ranges of ambient light in aircraft cockpits (see lines 1-3 of abstract). Narveson et al. discloses utilizing one or more ambient light sensors, positioned closely adjacent to or built into the bezel of the display unit, for correcting the brightness of the display unit (see column 6, lines 2-9 and lines 8-17 of abstract). Narveson et al. also discloses automatically maintaining the brightness/contrast of the display system at a selected setting using the ambient light sensors (see columns 5-6, lines 65-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness control system of Weindorf with the multiple ambient light sensors of Narveson et al. in order to provide the user with a best lit display device utilized in wide ambient light conditions by processing multiple ambient light sensor readings (see column 1, lines 55-64 and column 6, lines 2-9 of Narveson et al.).

In reference to claim 6, Weindorf and Narveson et al. disclose all of the claim limitations as applied to claim 5 above. Weindorf discloses the control circuitry to adjust the brightness of the display panel based on averaging the signals measured from the four light sensors and then selecting a brightness step control signal based on the averaged signals (see column 6, lines 59-65 and column 14, lines 52-67)

In reference to claims 8 and 13, Weindorf discloses an automatic brightness control system for a display device whereby the brightness of the display panel is controlled based on a fractional power function of the ambient light impinging on the display panel (see column 3, lines 38-42). Weindorf discloses the system to operate in a number of devices including laptop computers, personal organizers and the like (see column 5, lines 10-16). Weindorf discloses the

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display device comprised of a bezel for holding the outer perimeter of the display panel and control circuitry for controlling the display panel and backlight of the display panel (see column 5, lines 37-40 and 45-54). Weindorf further discloses the bezel to hold ambient light sensors (see column 6, lines 53-60). Note, the first and second signals (along with third and fourth signals for claim 13) measured from the first and second (along with third and fourth for claim 13) ambient light sensors of Weindorf are interpreted as being on the same side of the display as Weindorf reinforces that the light sensors are positioned to detect light impinging on the surface of the display panel (see column 14, lines 54-55). Weindorf also discloses that the system may comprise of multiple ambient light sensors (four sensors), providing four signals, to the control circuitry (see #114 and 108 of Figure 1), measuring the amount of light impinging on the surface of the display panel (see column 14, lines 52-67). Weindorf discloses the control circuitry to adjust the brightness of the display panel based on averaging the signals measured from the four light sensors and then selecting a brightness step control signal based on the averaged signals (see column 6, lines 59-65 and column 14, lines 52-67). Weindorf does not explicitly disclose adjusting both a brightness and intensity of the display however Narveson et al. does. Narveson et al. discloses a color display apparatus for use under wide ranges of ambient light in aircraft cockpits (see lines 1-3 of abstract). Narveson et al. also discloses utilizing one or more ambient light sensors, positioned closely adjacent to or built into the bezel of the display unit, for correcting the brightness of the display unit (see column 6, lines 2-9 and lines 8-17 of abstract). Narveson et al. discloses automatically maintaining the brightness/contrast of the display system at a selected setting using the ambient light sensors (see columns 5-6, lines 65-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement

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the automatic brightness control system of Weindorf with the multiple ambient light sensors of Narveson et al. in order to provide the user with a best lit display device utilized in wide ambient light conditions by processing multiple ambient light sensor readings (see column 1, lines 55-64 and column 6, lines 2-9 of Narveson et la.).

In reference to claims 9 and 14, Weindorf and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively. Weindorf also discloses that the system may comprise of multiple ambient light sensors (four sensors), providing four signals, to the control circuitry (see #114 and 108 of Figure 1), measuring the amount of light impinging on the surface of the display panel (see column 14, lines 52-67).

In reference to claims 10 and 15, Weindorf and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively, in addition, Weindorf discloses accessing a look-up chart to determine the brightness step number, which is in turn found from the averaged ambient light sensed signals (see column 6, lines 60-67).

In reference to claims 11 and 16, Weindorf and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively, in addition, Weindorf also discloses determining the brightness step number from performing a calculation such as a log fractional power function (see column 6, lines 65-67 and column 7, lines 57-62).

In reference to claims 12 and 17, Weindorf and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively. Weindorf discloses the control circuitry to adjust the brightness of the display panel based on averaging the signals measured from the four light sensors and then selecting a brightness step control signal based on the averaged signals (see column 6, lines 59-65 and column 14, lines 52-67). Note, since Narveson et al. discloses



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automatically maintaining the brightness/contrast of the display system at a selected setting using the ambient light sensors (see columns 5-6, lines 65-2), the office interprets Narveson et la. to inherently disclose generating some sort of contrast control signal.

***Response to Arguments***

5. Applicant's arguments, see page 5 of Applicant's Remarks, filed 7/21/2004, with respect to the 35 USC 103(a) rejection of claims 1-17 in view of Dutta have been fully considered and are persuasive. The claim rejections, as applied to the Dutta reference, have been withdrawn in view of the declaration filed 7/21/2004 which provides the evidence that the subject matter recited in the claims was invented prior to the filing date of Dutta.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703)-308-6829.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should  
be directed to the Technology Center 2600 Customer Service Office whose telephone number is  
(703) 306-0377.

aac

9/15/04



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